



## ACRIFIX® 1R 9019

### 1-Component Polymerization Adhesive

#### Product and Use

##### Type of Adhesive

1-component polymerization adhesive.  
Transparent clear, slightly purple, highly fluid solution of an acrylic resin in methyl methacrylate that polymerizes upon exposure to UVA light.

##### Applications

Preferably used for clear area bonding of **clear** extruded acrylic, e.g. PLEXIGLAS® XT 0A000.

For commercial use only.

##### Special features

The good capillary properties of ACRIFIX® 1R 9019 enable bonding of complex geometries such as laser-cut letters without masking the surrounding areas, and provides **bubble-free joints without adhesive seepage.** (The cutting angle must be removed first).

##### Storage/Transport

Keep containers tightly closed in a cool place **protected from light.**  
UN 1133

##### Working Instructions

##### Preparing the parts to be bonded

Degrease the surfaces to be bonded with isopropyl alcohol.

**Important:** Internally stressed parts, especially laser cut parts must be annealed before bonding in order to avoid stress cracking. The annealing conditions depend on the type of material, the degree of forming and the thickness of the parts to be bonded. Parts made of extruded and injection-molded acrylic should be annealed as a matter of principle. Typical annealing times are 2 to 4 hours in an airflow oven at 70 to 80 °C.

##### Bonding Technique

Fix the parts to be bonded in the desired position (avoid shading). Introduce ACRIFIX® 1R 9019 into the joint by means of a glue dispenser, PE disposal pipette or disposable syringe. Due to its good capillary properties, the adhesive diffuses under the adherent surface by itself. The bond is then exposed to a suitable UVA light source until fully cured (see section "Curing").

##### More Information

The parts to be bonded should fit precisely since ACRIFIX® 1R 9019 only fills gaps to a certain extent. In individual cases it can be advantageous to thicken ACRIFIX® 1R 9019 with 5-10% ACRIFIX® 1R 0192; this way potential tolerances can be compensated. Severely stressed bonds or those intended for outdoor exposure should be annealed for 2 to 4 hours at 70 to 80 °C immediately after curing.  
ACRIFIX® 1R 9019 must not be allowed to enter closed cavities (e.g. double glazing, tube interiors) because curing is significantly poorer in these areas and there is a risk of stress cracking in the part to be bonded.

For more details see our Guideline "Joining, Ref. No.: 311-3"

### Properties of Bonds

#### Subsequent treatment of bonded items

- 2 to 6 hours after curing.
- Sanding and polishing can be performed after 24 hours.

#### Strength of Bonds

The bonds only acquire their final strength after about 24 hours or after immediate annealing as soon as the adhesive has cured.

| Tensile shear strength (v = 5 mm/min)                                      |              |                             |
|--|--------------|-----------------------------|
| Material (to itself)   | non-annealed | annealed for 5 hrs at 80 °C |
| PLEXIGLAS® XT 0A000  | 15 - 25 MPa  | 45 - 55                     |
| cured using Philips Cleo Performance 40 W-R                                |              |                             |
| Annealing increases the strength and also improves the weather resistance. |              |                             |

#### Appearance of Bonds

Transparent clear, almost colorless, surface may be slightly yellowish.

#### Limitation of Liability

Our ACRIFIX® adhesives and other service products were developed exclusively for use with our PLEXIGLAS® products and are specially adjusted to the properties of these materials. Any recommendations and guidelines for workshop practice therefore refer exclusively to these products.

Claims for damages, especially under product liability laws, are ruled out if made in connection with the use of products from other manufacturers.

| Curing (System: polymerization by UV-A light)                           |   |                        |
|---|---|------------------------|
|   | Illuminant  | curing time (at 25 °C) |
| Bond/lamp and lamp/lamp spaced at approx. 20 cm and 10 cm, respectively | superactinic UV-A fluorescent lamp, e.g. Philips TL .../05                      | ~30min                 |
|   | UV-A fluorescent lamp for tanning beds, e.g. Philips Cleo Performance, from 40W | ~30min                 |
|   | direct sunlight   | 10–20 min              |
|   | Pot life (at 200 g in glass vessel with diffuse indoor lighting)                | ~30min (at 25 °C)      |

#### Safety Measures and Health Protection

For further information on safety measures, the exclusion of health risks when handling adhesives and on their disposal, see our Safety Data Sheet.

Availability according to the current sales range.

### Typical Values

| Properties                                    | Values                                     |
|---|--|
| Viscosity;<br>Brookfield A/60/20°C            | ~0.6 mPa · s                               |
| Density (20 °C)                               | ~0.94 g/cm <sup>3</sup>                    |
| Refractive index n <sub>D</sub> <sup>20</sup> | ~1.416                                     |
| Color   | transparent clear to slightly purple       |
| Flash point; DIN 51755                        | ~ 10 °C                                    |
| Solids content                                | 23 - 27 %                                  |
| Storage stability                             | 2 years after filling, if correctly stored |
| Storage temperature                           | max. 30 °C                                 |
| Packaging materials                           | Colored glass and aluminum                 |
| Cleaning agents<br>for equipment              | ACRIFIX® TC 0030, ethyl acetate            |

**Röhm GmbH**  
Acrylic Products

Riedbahnstraße 70  
64331 Weiterstadt  
Germany

[www.plexiglas.de](http://www.plexiglas.de)  
[www.roehm.com](http://www.roehm.com)

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